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NUEXCO

NOVEMBER 1982 NUMBER 171

Monthly Report on the Nuclear Fuel Market

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EXECUTIVE SUMMARY

Exchange Value $17.50. 50 Cent Increase First in Four Years

The **Exchange Value** as of October 31, 1982 is $17.50 per pound U_3O_8. The spot and near-term markets were unusually active for the fifth consecutive month. Nine uranium sales are reported, involving a total of 1.4 million to 3.0 million pounds U_3O_8 equivalent.

Near-term Supply and Demand Both Increased Significantly

Active sellers in the zero to one year time frame are offering 4.3 million pounds U_3O_8, up from 3.3 million pounds last month. Even after spot and near-term transactions representing more than one million pounds were concluded during October, *active uranium demand* more than tripled to 2.1 million pounds U_3O_8 as of the end of the month.

Near-term Supply-Demand Imbalance Eased

The ratio of near-term supply to near-term demand declined to 2.1:1 this month, less than half last month's ratio of 5.0:1.

Transaction Value Declined $0.30 to $17.00

The **Transaction Value** as of October 31, 1982 is $17.00 per pound U_3O_8. It includes 20 transactions totaling 3.6 million pounds U_3O_8 and covers a period of three months.

Conversion Value Rose Fifty Cents to $1.60

The **Conversion Value** as of October 31, 1982 is $1.60 per pound U as UF_6, up fifty cents from last month. No conversion transactions are reported. Active sellers are offering 1.7 million pounds U as UF_6 in near-term conversion services, about the same as last month. While active demand more than tripled, it still amounts to only 320 hundred thousand pounds UF_6.

Africa

Third quarter production figures for **South Africa** show a 5 percent increase over the second quarter. The IAEA granted full membership to the UN Council for **Namibia.**

Australia

Analysis of ERA's first annual report indicates Ranger production cost was approximately A$23.25 per pound U_3O_8. Australian government chose Urenco-Center gas centrifuge technology as basis for studying feasibility of domestic enrichment.

Canada

Saskatchewan government has repealed its regulation requiring that the province be offered up to 50 percent equity in any new mining venture.

Europe

In **France** there is concern that the nation's ninth five-year plan will call for substantial cutbacks in the nuclear power construction program.

In **Spain** the socialists' recent election victory may jeopardize the country's present nuclear program.

Far East

People's Republic of China, Canton Electric and China Light and Power have made a "decision in principle" to proceed with the Canton-Hong Kong nuclear power project.

In **Japan**, ANRE comparative estimates of electricity generation costs show substantial advantage for nuclear power, primarily due to Japan's having kept length of construction cycle under control.

United States

Number of uranium properties being offered for sale has increased sharply in recent months, but the few potential buyers are being very selective.

Market Analysis

Nuexco's brokerage experience indicates that the availability of the Variable Tails Assay Option has encouraged the existence of an active secondary market in SWU.

Raw Materials

Describes uranium occurrences in Finland.

Figures of the Month

Has been moved to the reverse side of this **Executive Summary** and has been expanded to include numbers relevant to SWUs and enriched U.

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FIGURES OF THE MONTH

	This Month	Last Month	12 Months Ago
	(Referenced to October 31, 1982)		
Exchange Value[1]	17.50	17.00	23.50
Transaction Value[1]	17.00	17.30	24.10
Conversion Value[2]	1.60	1.10	1.10
Loan Use Charge Rate[3]	6%	6%	5½%
Near-Term Uranium Supply[4]	4.3	3.3	8.7
Near-Term Uranium Demand[5]	2.1	0.66	4.3
Near-Term Supply-Demand Ratio	2.1	5.0	2.0
Current Transactions[6]:			
Number of Transactions	9	7	5
Quantity of Material[7]	1.4-3.0	0.8-2.0	1.0-2.1
USDOE SWU Prices[8]:			
AFC	138.65	138.65	130.75
Requirements	149.85	149.85	119.00
Optimum Tails Assay[9]	.341	.346	.306
Calculated Price of Enriched UF_6[10] [11]:			
2.5 w/o U_{235}	668.30	657.50	708.05
3.0 w/o U_{235}	865.68	852.53	911.10
3.5 w/o U_{235}	1,067.20	1,051.70	1,118.06
4.0 w/o U_{235}	1,271.79	1,253.94	1,327.91

[1] US $ per pound U_3O_8 equivalent
[2] US $ per pound U as UF_6
[3] Per annum
[4] Active inquiries to sell, for delivery within 12 months after contract signing (millions of pounds U_3O_8)
[5] Active inquiries to purchase, for delivery within 12 months after contract signing (millions of pounds U_3O_8)
[6] Uranium transactions only; does not include loans, conversion, or SWU transactions
[7] Millions of pounds U_3O_8, equivalent
[8] US $ per SWU
[9] Percent U_{235}.
[10] Theoretical calculation based on Exchange Value, Conversion Value, 0.20 percent tails assay and the USDOE price for AFC SWUs.
[11] US $ per KgU as UF_6

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MONTHLY REPORT ON THE URANIUM MARKET

November 1982 No. 171

R. WESLEY MILLER, *EDITOR*

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FOREWORD

Nuexco will host a hospitality suite during the Atomic Industrial Forum's Annual Conference 1982. The suite will be at the Washington Hilton in Washington, D.C., November 14-17. We look forward to seeing you there.

* * *

Nuexco is pleased to advise Subscribers of the elections of J.R. (Bob) Wolcott as Chairman and Chief Executive Officer, and George White, Jr. as President.

Bob Wolcott has been associated with Nuexco since its inception, serving as a Director since 1968 and as President since 1977. Since 1968, Bob has also headed his own consulting firm specializing in strategic planning for the nuclear industry. Bob has been in the nuclear business since the very beginning, having been the design manager for Dresden Unit 1, the first commercial BWR built in the US. Bob also held a variety of positions in engineering and international marketing with the General Electric Company's nuclear division.

Bob Wolcott

George White, Jr. joined Nuexco in 1971 as Marketing Manager. He was elected a Vice President in 1972 and Senior Vice President and a Director in 1979. Before joining Nuexco, George was associated with the investment banking firms of Stone & Webster and Drexel Harriman Ripley in New York City.

George White, Jr.

Wayne D. Fowler has also been elected a Director joining George, Bob, Don Allen and Jules Pearlman as members of Nuexco's Board of Directors. Wayne joined Nuexco in 1975 as a Vice President, having previously been associated with General Atomic in San Diego.

Nuexco's continued growth has led to a geographic expansion which now includes offices in New York City and Europe, managed respectively by Ken McCue and Jim Vaughan. Menlo Park brokerage operations are managed by Wayne Fowler and a planned Atlanta office will be managed by Jerry Reaves.

The restructuring of the firm during the past year, combined with our existing network of representatives and consultants, is designed to provide our clients with increased and more timely access to Nuexco's full resources.

Wayne Fowler

MARKET ACTIVITIES

PRICING

The **Exchange Value** as of October 31, 1982 is $17.50 per pound U_3O_8, up fifty cents from last month. During October, the spot and near-term markets were unusually active for the fifth consecutive month. The *Market Data* section lists nine uranium transactions this month, involving a total of 1.4 million to 3.0 million pounds U_3O_8 equivalent.

* * *

Active uranium supply (material offered at competitive prices, terms and other conditions) amounts to 4.3 million pounds U_3O_8 in the near term, an increase of one million pounds since last month. Even after spot and near-term transactions representing more than one million pounds U_3O_8 were concluded during the month of October, *active uranium demand* more than tripled to 2.1 million pounds U_3O_8 as of the end of the month. Therefore, the *supply-demand ratio* declined to 2.1:1, less than half last month's level of 5.0:1.

* * *

The **Transaction Value** as of October 31, 1982 is $17.00 per pound U_3O_8, down $0.30 from a month ago. The current Transaction Value includes 20 transactions totaling 3.6 million pounds U_3O_8 and covers a period of three months. The time lag built into Transaction Value was very evident, as it continued the decline of recent months, reaching a level equal to the previous two months' Exchange Value.

* * *

The **Conversion Value** as of October 31, 1982 is $1.60 per pound UF_6, up fifty cents from a month ago, but the market remains very thin. Active offers to sell conversion services in the near term amount to approximately 1.7 million pounds U, about the same as last month. Although *active conversion demand* more than tripled, it still amounts to only 320 thousand pounds U. Nevertheless, there is a consensus that the price required for secondary market transactions is once again substantially higher than last month.

* * *

The **Loan Use Charge Rate** remained at six percent per annum. Some discussions are taking place and one transaction is reported, but the loan market is generally quiet.

* * *

This month's three percent increase in the Exchange Value should be viewed in the perspective of market events during the first ten months of this year. Last year ended with the Exchange Value at $23.50 per pound U_3O_8, having been at that level for six months. Prices appeared to have bottomed. However, renewed and aggressive selling developed as a result of several factors, including cancellations and delays of nuclear facilities, continued overproduction, growing inventories, high interest rates and litigation. The January 31, 1982 Exchange Value dropped to $23.00, setting in motion a sustained 28 percent decline, which saw the Exchange Value reach $17.00 by the end of August.

Nuexco is aware of at least seven entities, each of which has sold during 1982 more than 1,000,000 pounds U_3O_8 for spot or near-term delivery. Sellers included utilities and producers, as well as US and non-US entities. While essentially completed now, those sales campaigns were marked by aggressive pricing and led to sales of more than 10 million pounds U_3O_8. With that sort of pressure being exerted on the spot and near-term markets, it is not surprising that the Exchange Value declined to $17.00.

Because the current increase in the Exchange Value is the first to occur since November 1978, there is a tendency to assume that prices have bottomed out and a reovery is underway. The prospect of a US embargo on the import of non-US origin uranium may have contributed to this month's price rise by altering the perceptions of some market participants. On the other hand, the embargo issue and the current firming in prices may be more a coincidence of timing than cause and effect; the embargo issue first surfaced in early 1982 when the Exchange Value was well over $20.00 per pound U_3O_8. Nevertheless, regardless of whether they turn out to be accurate, market perceptions can be self-fulfilling *in the short term*.

For the long term, however, it would be imprudent to ignore certain basic and very powerful market factors. The inventory redistribution so necessary for any semblance of balance between supply and demand is far from complete. While some utilities and producers have liquidated excess stocks, others could become sellers at any time, particularly if prices seemed to be firming.

It must also be observed that much of the purchasing currently taking place is discretionary, and such demand could well vanish in the face of higher prices. Utilities willing to increase inventory at what they view as bargain prices will likely withdraw if prices rise sub-

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MARKET ACTIVITIES

stantially. Similarly, producers who are purchasing rather than producing can and will produce when the economics of the "make or buy" decision change.

Furthermore, the basic production-consumption equation is out of balance and gives every indication of remaining so for several more years. Production continues at a rate of 110 million pounds U_3O_8 annually. Consumption, though rising, is still only about 60 million pounds annually. It is difficult to develop a case for a strong price recovery under such conditions.

Thus, while current perceptions could lead to price recovery in the near term, market participants would be well advised to bear in mind those market factors that have too often been ignored in the short history of the commercial uranium market. The fundamentals of supply and demand can be ignored only at great economic risk.

AFRICA

Production figures from South Africa gold-uranium operations for third quarter 1982 and year-to-date are presented in Table 1.

Table 1

REPUBLIC OF SOUTH AFRICA:
Production from Gold-Uranium Operations
(Thousands of Pounds U_3O_8)

Operation	3 Q 82	YTD
Beisa (St. Helena)	149	404
Blyvooruitzicht	127	444
Buffelsfontein	315	955
CHEMWES	376	992
Dreifontein Consolidated	129	383
ERGO	141	431
Harmony	329	971
Hartebeestfontein	226	694
J.M.S.	457	1,538
Randfontein	271	747
Vaal Reefs	1,062	2,801
Western Areas	105	263
Western Deep Levels	94	290
TOTAL:	3,781	10,913

Third quarter production of 3.8 million pounds U_3O_8 represents a 5 percent increase over the second quarter total of 3.6 million pounds U_3O_8. Some comments on experiences of individual production operations during the third quarter:

1. The Beisa section of St. Helena made an operating profit for the first time. Third quarter operating income, including that from gold as a by-product, amounted to R 4,862,000.

2. Despite a 5 percent increase in tons treated, Blyvooruitzicht production dropped 17 percent due to a 21 percent drop in grade from 0.326 to 0.258 pounds U_3O_8 per ton. Despite the fall in production, the irregular timing of sales produced a 23 percent rise in profits.

3. CHEMWES production increased 34 percent due to an 11 percent increase in throughput and a 20 percent increase in grade, to 0.397 pounds U_3O_8 per ton.

4. At Randfontein, the new solvent extraction plant is operating at design efficiency. That, combined with higher throughput, yielded a 17 percent increase in production.

5. At Vaal Reefs, the 8 percent production increase was due to a 10 percent increase in grade, to 0.507 pounds U_3O_8 per ton.

6. Western Areas reached agreement with their long term customer, allowing the advancement to 1982 of certain sales scheduled for 1983. A substantial cash flow benefit resulted.

* * *

The United Nations (UN) Council for **Namibia** has been accepted into the International Atomic Energy Agency (IAEA) as a full member. This development is controversial on three levels:

1. It can be regarded as one more step along Namibia's road to independence, since the Republic of South Africa will no longer represent Namibia in an important, at least for uranium matters, world political organization.

2. It introduces a new level of politicization to the IAEA. Since South Africa does not recognize the United Nations Council for Namibia, its admission to the IAEA is tantamount to a political repudiation of South Africa's policies in the region.

3. It may cause trouble for Rossing Uranium and its owners, principally Rio Tinto Zinc (RTZ). The Council has repeatedly demanded that RTZ cease "plundering" Namibia's uranium resources. In fact, the chairman of

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the UN Council's delegation to the IAEA meeting, Mr. Starcevic of Yugoslavia, predicted renewed attempts along those lines.

The vote to admit the UN Council to the IAEA was far from unanimous. Some members objected on the grounds that the UN Council for Namibia did not satisfy the specified IAEA requirements for statehood. Some argued that the move would jeopardize the delicate negotiations presently under way on Namibian independence.

It is not yet clear whether this development will have any commercial impact. In the unlikely event that the UN Council succeeded in interrupting or even terminating uranium exports from Rossing, the world's largest single uranium production center, the effects on Rossing's owners and employees could be substantial. On the other hand, a uranium market in which annual production presently exceeds annual consumption by 80 to 90 percent would adjust quite easily in the long run. Some short term effects on the spot market might occur, if any of Rossing's customers felt the need to replace those deliveries with spot purchases. However, the chances of that happening are slight, as Rossing's customers all have ample inventories.

AUSTRALIA

The Australian government took a further step towards a deeper involvement in the nuclear fuel cycle. It accepted the recommendations of the Uranium Enrichment Group of Australia (UEGA) to use the Urenco-Centec gas centrifuge technology as the basis for studying the feasibility of an Australian enrichment plant. The UEGA recommendations have narrowed down the choice of sites for the plant to either Adelaide or Brisbane. Moreover, the Government approved further studies and set the foreign investment limit at 50 percent (25 percent for uranium projects).

UEGA, comprising four big resource development companies [BHP, CSR, Western Mining Corp. (WMC) and Peko Wallsend] will commence its A$5 million study as soon as the agreement with the enrichment technology holder is finalized. The plant, if built, may commence with an annual capacity of not less than 200,000 SWU in 1992 and, depending on markets, could reach 1 million SWU by 1997.

To gain a clearer view of the likely demand for Australian enrichment services even at this early stage, UEGA and Urenco will carry out a six-month joint market survey as the first phase of the feasibility study.

A variety of political and economic considerations lie behind the UEGA plans:

1. Federal policy calls for upgrading any raw material to the highest possible value prior to export. For far-sighted and talented corporations with significant uranium interests (WMC is a majority partner in the Yeelirrie and Roxby Downs projects; Peko Wallsend owns 31 percent of ERA, which owns the Ranger Mine; CSR owns the Lakeway and Honeymoon projects) this policy presents an important opportunity demanding serious exploration of its potential. Australia's huge uranium resources have encouraged strong Federal support for the enrichment project.

2. The Government's policy is designed for the long term and seems impervious to current market weakness and the pockets of anti-nuclear sentiment in the electorate.

3. The discovery of the very large Roxby Downs deposit has generated the hope for long-term improvements in the industrial base of South Australia. This prospect has motivated the South Australian state government to mount, for several years now, a strong political campaign in favor of enrichment in the face of heavy opposition. The political risk is high even now, as a solitary opponent to uranium development holds the balance of power in the state Parliament. Nevertheless, the Liberal Party state government has openly proclaimed their state as a suitable plant site.

4. With rising unemployment in Australia, job creation is thought to be the main theme in the coming state and federal elections. Therefore, they reason, federal support is likely to lean in the direction of the weakest Liberal State Government.

Although UEGA has limited the site choices to Adelaide and Brisbane, the Northern Territory Government has entered its bid in the stakes for the plant site. Their main argument is the higher degree of community acceptance in the Northern Territory for uranium extraction and processing which, in their view, will eventually outweigh the higher construction and infrastructure costs prevailing in that part of Australia. Political as well as environmental constraints, including water supply, will dictate the ultimate choice of site.

UEGA's technology choice after months of study has certainly cleared the air. It requires the group to follow through by considering also the subsidiary question of how best to provide UF_6 conversion services to its potential enrichment customers. As a first priority, however, UEGA will explore the attitudes of utilities to an Australian enrichment option.

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MARKET ACTIVITIES

Energy Resources of Australia (ERA) has released its first annual report, covering the operations of their Ranger Mine from October 1, 1981 to June 30, 1982. ERA announced an after-tax profit of A$37.9 million.

Producing 5.9 million pounds of U_3O_8, the mill's only teething trouble was with adherence of protective rubber linings on equipment which treats acidic material. In-fill drilling has increased Ranger's uranium resource at No. 3 ore body significantly (proven and probable ore combined). Ranger's present reserve position is summarized in Table 2.

Table 2

RANGER'S RESERVE POSITION

Total Ore Reserves[1]	Million Tonnes Ore	Grade (% U_3O_8)	Tonnes U_3O_8
July 1981	34.5	0.243	95,978
July 1982	51.0	0.247	125,835
Increase	16.5	0.004	29,857
No. 3 Ore Body			
July 1981	23.6	0.182	43,100
July 1982	35.2	0.207	72,838
Increase	11.6	0.025	29,738

[1]Includes stockpiles

An Australian firm of investment analysts published an income and expense statement after analyzing the ERA accounts. Nuexco analyzed the statement further, resulting in the data presented in Table 3.

Three brief comments:

1. Although direct operating costs amount to only A$6 per pound, the after-tax profit of A$37.9 million represents less than a 9 percent return on capital and capitalized interest of A$431 million.

2. Like every other uranium producer, Ranger could not survive at current spot market price levels. Interest costs — the single largest cost item — would have to fall by 75 percent before Ranger would break even at current E.V. (before repayment of project loans).

3. Assuming annual cost increases of 10 percent (other than interest) Ranger's total costs per pound U_3O_8 would reach the level of the current Australian floor price in 4.5 years. The current floor price is approximately double current spot market prices.

* * *

CANADA

The provincial government of Saskatchewan has repealed the regulation requiring that the province be offered up to 50 percent equity interest in any new mining venture. It was under this regulation that Saskatchewan Mining and Development Corporation (SMDC) acquired its existing interests in the Key Lake and Cluff Lake deposits.

Repealing of the provincial regulation still does not affect the Canadian federal requirement that Canadian companies own at least two-thirds equity in producing uranium deposits. However, it does enhance the probability that new Canadian investors will be attracted to Saskatchewan and thereby increases the likelihood that areas such as Dawn Lake and Midwest Lake will be developed.

Eldorado now owns 100 percent interest in Rabbit Lake and the other previously owned Gulf deposits, and SMDC owns interests in Key Lake and Cluff Lake. As both Eldorado and SMDC are government entities, the majority of the uranium produced in Saskatchewan is now being produced by companies which pay neither taxes nor royalties to the province. Therefore, it is not surprising that Saskatchewan would welcome the introduction of new taxpayers into the province. In this regard, it might be timely for the Canadian authorities to re-examine the federal ownership requirements as well.

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Table 3

ANALYSIS OF ERA ACCOUNTS
(Year ending June 30, 1982)

	Millions of A$[1]	Millions of Pounds U_3O_8	A$ Per Pound U_3O_8[5]
A. Distribution of Production and Revenues:			
Shipments under contracts[2]	117.1	3.4	34.44
Return to government stockpile[3]	28.9	1.1	26.27
Inventory on hand	—	1.4	
Other income[4]	4.2	—	
TOTAL:	150.2	5.9	32.44
B. Expenses			
Direct operating costs	27.2		6.04
Depreciation + amortization	16.6		3.69
Interest	48.0		10.67
Royalties[6]	8.2		1.82
Rehabilitation	3.3		0.73
Other	1.3		0.29
	104.6		23.24
Profit before tax	45.6		10.13
Taxation	7.7		1.71
	37.9		8.42

[1] Because it is difficult to relate prices to US dollars without full disclosure as to when shipments were brought into account, the dollar amounts have not been converted into US currency.

[2] [3]The Company did not publish shipments or prices. It is estimated that the shipments brought to account are as follows:

[2]Overseas contracts: 3.4 m. lb. @ $34.44 = A$117.1m

[3]Stockpile replacements to Australian Government: 1.1 m. lb. @ $26.27 = A$28.9m.

TOTAL: A$146.0m.

[4] Other income includes: interest received ($1.7m) and exchange gains ($2.5m).

[5] ERA does not attribute to material held in stock any royalties, headquarters overhead, or interest expenses. Stockpiled material has been included in the working capital account. Therefore, expenses, total revenues, and profits are allocated to 4.5 million pounds, the amount shipped plus that returned under government contracts.

[6] Royalties cover both payments to Governments and Aboriginal interests.

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MARKET ACTIVITIES

EUROPE

Last month, Report 170 presented excerpts from some of the speeches delivered at the Uranium Institute's annual symposium. This Report will present excerpts from the comments of Dr. Klaus Peter Messer of Rheinisch-Westfaelisches Elektrizitaetswerk AG (RWE), giving a consumer's viewpoint on the uranium market. All of the speeches presented at the symposium will be published by the Uranium Institute in due course.

Dr. Klaus Peter Messer — A Consumer's Viewpoint
RWE — (Relative to Market Stability)

We need . . . stability [of the market] — though there may be differences of opinion as to what the phrase means. We need a high degree of security of supply. And the market also needs security of demand.

There are several factors which are important for market stability — or better, "instability"— but the most important is probably the forecasts which are published from time to time, . . . For the year 2000, total capacity changed from a predicted 2,300 GW in 1975 to 700 GW in 1982. This is the main reason why the market has not functioned as well as it should; . . .

. . . the so-called spot price should not be taken as the true uranium price in long-term contracts. . . But there is a relationship between spot and long-term market prices, . . . The spot price can 'pull' the long-term market price, with a force which depends on the magnitude and tempo of the change in the spot price. When it changes very fast it pulls the long-term price all the harder.

By comparing the average spot price over a number of years with what we know was the average long-term market price in the European market, we have succeeded in synthesizing a calculated long-term price, based on an adjusted spot price, which is in remarkable agreement with the actual trends. This seems to indicate that the pulling theory may be correct and we, therefore, now introduce something in our long-term contracts to reflect this feeling. However, when we did the same for the US market . . . the formula gave much poorer agreement. So I have no generally applicable solution to offer, at least one with the required accuracy.

There are, of course, other factors at work. If we compare the proportion of spot sales or purchases in Europe and in the United States, there is a noticeable difference. . . It highlights differences of philosophy between the US and Europe regarding long-term security of supply. We in Europe have a tendency to secure our needs of uranium with long-term contracts, which of course can then leave us unable to buy when spot prices fall. While at the present time this may seem regrettable, I am sure that someday this attitude will be seen to have its advantages, because the spot [price] curve will quite certainly reverse and start rising again.

That is our main worry. I hope that this does not happen at a time and on a scale which will seriously hurt us. One danger is that at times when the market is as depressed as it is now, developments like exploration and installing new production come to a halt. This has to be seen against the certainty that we shall have a doubling of demand in the coming years. There are so many power stations under construction that I fear that the market will not be able to provide the degree of security of supply which we need.

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In **France**, the ninth five-year plan is being formulated. The basis for the plan has been adopted by the Council of Ministers and has been sent forward to the National Plan Commission. The final version will appear in the spring of 1983.

The Plan's Energy Committee is working on forecasts of energy consumption in the 1990s which are substantially lower than those in the Hugon Report which the government used at the time of the Parliamentary debate on nuclear energy in October, 1981. At that time, approval was given for construction starts on six reactors (one unit of 900 MWe and five of 1300) during 1982-83. Approval was based on a forecast of economic growth in France of 5 percent per annum for 1981-90. However, growth was only 0.2 percent in 1981, will be around 1.5 percent in 1982 and about 2 percent in 1983. The result has been a dramatic fall in energy use, which was aided by the success of the government's energy conservation measures. It is interesting to recall that three years or so ago, the Barre Government forecast electricity needs of 460 billion KWH in 1990. The Socialist government has revised this down to 415 billion KWH and some experts now predict around 375 billion KWH.

Rumors have been circulating in French newspapers for the past month that, instead of authorizing the start of construction on six nuclear reactors in the 1984-5 period, the government will reduce this number by half. The Energy Ministry has formally denied that the government has taken any decision on the possible

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